

REMARKS

Claims 1-26 and 31-34 were examined by the Office, and in the Office Action of April 28, 2009 all claims are rejected. With this response, no claims are amended, added or cancelled. Applicant respectfully requests reconsideration and withdrawal of the rejections in view of the following discussion.

Claim Rejections Under § 103

In section 2, on page 2 of the Office Action, claims 1-26 and 31-34 are rejected under 35 U.S.C. § 103(a) as unpatentable over Pecen et al. (U.S. Patent No. 6,714,781) in view of Ko et al. (U.S. Publ. Appl. No. 2006/0227754). Applicant respectfully submits that claim 1 is not disclosed or suggested by the cited references, because the cited references fail to disclose or suggest all of the limitations recited in claim 1. The cited references, alone or in combination, at least fail to disclose or suggest using a packet associated control channel to convey a radio link control or multiple access control message, while in a packet transfer mode, as recited in claim 1.

In contrast to the present invention, Pecen does not suggest transitioning from a packet mode to a dual transfer mode. Instead, Pecen discloses transitioning from a circuit-switched mode to dual transfer mode. See Pecen column 1, lines 9-13 (the present invention relates to a method for receipt of paging messages from a packet-switched data domain while a mobile station is in a dedicated mode circuit-switched voice connection). Claim 1 specifically recites using a packet associated control channel to convey a radio link control or multiple access control message, while in a packet transfer mode. In Pecen, receipt of a packet-switched paging message begins the process of "packet-transfer mode set up" which is not completed until after a packet resource request (132) and a packet uplink assignment (134). See Pecen column 3, lines 63-67. Therefore, in Pecen there is no "packet transfer mode" and no "dual transfer mode" until after a lengthy signaling sequence that is initiated by a packet-switched paging message. See Pecen column 4, lines 44-46. Accordingly, Pecen fails to disclose or suggest conveying a radio link control or multiple access control message while in a packet transfer mode. Claim 1 clearly

recites that a packet associated channel is initially used, and the packet switched resources are maintained when dual transfer mode is assigned.

Pecen describes how a Dual Transfer Mode (DTM) capable mobile station (MS), which is engaged in a circuit-switched (CS) connection, can be notified about incoming downlinked packet-switched (PS) data from the (DTM-capable) network. This functionality is needed in case the MS is in a GPRS Mobility Management (GMM) standby state, which means that the Serving GPRS Support Node (SGSN) knows the MS location on a cell-level. The SGSN is roughly the PS equivalent of the switching center for CS, which is called the Mobile Switching Center (MSC). If the MS is in a GMM standby state, the MS needs to be paged in the routing area (RA) level. For this reason, a Radio Resource (RR) protocol layer (specified for CS operation) message was created, because an MS engaged in a CS connection does not listen to its paging channel (PCH) or packet paging channel (PPCH) that can be sent over the CS radio link.

In response to this (PS) paging (which has been achieved using the new RR message), Pecen says that the MS must transmit any valid Logical Link Control Protocol Data Unit (LLC PDU), the LLC being specified for 2G GPRS. When the MS sends this PDU to the network, the SGSN learns in which cell the MS is located. This then enables the SGSN to send the downlink data (i.e. data from the network toward the MS), for which it paged the MS in the first place. This downlink data is sent to the correct Base Station Controller (BSC), i.e. the BSC currently responsible for the MS's (CS) connection. The data from the SGSN to the BSC then causes the BSC to establish a downlink TBF (temporary block flow) for the MS. At this point, the MS then moves from the dedicated mode (having only a CS connection) to dual transfer mode (having both CS and PS connections simultaneously).

Accordingly, Pecen describes a method enabling the network to PS-page the MS during a circuit-switched connection. The message sent by the network in Pecen is a RR message and its sole purpose is to enable PS paging during a CS connection. Pecen does not teach or suggest a transition to dual transfer mode (CS+PS) from packet transfer mode (PS only), enabling seamless circuit-switched data transfer. The Pecen reference provides no capability for making such a direct transition possible, and Pecen does not suggest anything that might enable such a transition.

The Office asserts on page 7 of the Office Action that Pecen discloses a method and apparatus for performing a transition from a packet mode to a dual transfer mode in which packets are transferred. However, Pecen only discloses that if the base station controller determines that the mobile station is capable of operating in a dual transfer mode, and if the base station controller determines that the mobile station is not currently engaged in circuit-switched voice interchange activity, the packet-switched paging message is sent to the mobile station on the paging channel. See Pecen column 5, lines 3-7. However, this statement clearly indicates that no circuit-switched connection is active, but this statement does not mean that the mobile station is engaged in a packet-switched connection. Instead, it merely indicates that the mobile station is about to enter packet mode, but Pecen is completely silent regarding transitioning from the packet mode to the dual transfer mode, as recited in claim 1. In fact, Pecen specifically states that if the base station controller determines that the mobile station is currently engaged in circuit-switched voice interchange activity, the packet-switched paging message is sent from the base station controller to the mobile station. See Pecen column 5, lines 8-13. However, as discussed above Pecen, never mentions transitioning from packet-switched mode to dual transfer mode, as recited in claim 1.

Independent claims 15, 31 and 33 contain limitations similar to those recited in claim 1. Therefore, independent claims 15, 31 and 33 are not disclosed or suggested by the cited references for at least the reasons discussed above with respect to claim 1.

The dependent claims rejected above all ultimately depend from an independent claim. Therefore, the rejected dependent claims are not disclosed or suggested by the cited references at least in view of their dependencies.

CONCLUSION

For at least the foregoing reasons, the present application is believed to be in condition for allowance, and such action is earnestly solicited. The undersigned hereby authorizes the Commissioner to charge Deposit Account No. 23-0442 for any fee deficiency that may be required to submit this response.

Respectfully submitted,

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